UNITED STATES DEPARTMENT OF AGRICULTURE

FARMERS' BULLETIN

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Contribution from the Bureau of Biological Survey, Henry W. Henshaw, Chief.

HOW TO ATTRACT BIRDS IN NORTHWESTERN UNITED STATES.

By W. L. McATEE, *Assistant Biologist.*

CONTENTS.

INTRODUCTION.

The means of increasing the number of birds about our homes are few and simple. They comprise adequate protection and the provision of suitable nesting places, food, and water. In a series of publications, of which this bulletin relating to northwestern United States (fig. 1) is the second,[1] it is planned to recommend practicable methods of attracting birds about homes in the various parts of the United States. Especial attention will be given to the value of fruit-bearing shrubs and trees, as less information relating to these as a means of attracting birds is available than concerning

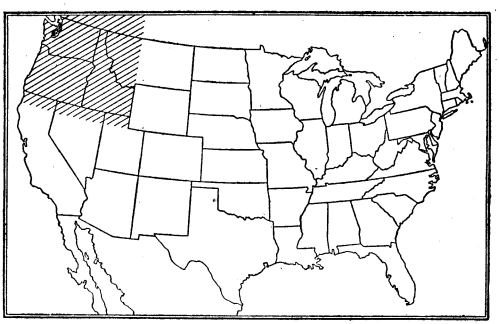


FIG. 1.—Map of the United States, the shaded area showing the territory to which this bulletin applies.

[1] The first in the series was Farmers' Bulletin 621; McAtee, W. L., "How to Attract Birds in Northeastern United States," 15 pp., 11 figs., 2 charts, 1915.

NOTE.—Means of providing a food supply for wild birds about homesteads in the Northwestern States are especially described in this bulletin.

more widely known but not more important measures, as protection, winter feeding, and the supplying of nesting boxes and water. Furthermore, the last-named measures need not vary so much with the locality as does choice of fruit-bearing shrubs and trees.

PROTECTION.

Protection is the prime requisite for increasing the number of birds in any area, and the results of protection are in direct proportion to its effectiveness. Besides being insured against every form of persecution by human kind, birds must be defended from various natural foes. The most effectual single step is to surround the proposed bird sanctuary with a vermin-proof fence (fig. 2). Such a fence should prevent entrance either by digging or by climbing, but will serve its greatest use if it can not be climbed and is therefore cat-proof. If it is impracticable to build an impenetrable fence, the

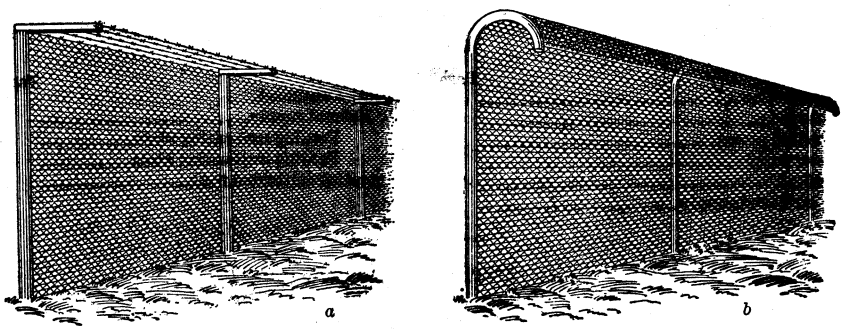


FIG. 2.—Cat-proof fence; *a*, with barbed wires; *b*, with loose overhanging netting.

next best device is to put guards (fig. 3) of sheet metal on all nesting trees and on poles supporting bird houses. This should be done in any case where squirrels or snakes are likely to intrude, as it is usually impossible to fence out these animals. Tree guards should be 6 feet or more above ground. Attacks by hawks, owls, crows, jays, or other enemies are best controlled by eliminating the destructive individuals. Those who wish to combat English sparrows will find full directions for so doing in Farmers' Bulletin 493.[1]

BREEDING PLACES.

Although a considerable number of our native birds build their nests on the ground, the majority place them in trees or shrubs, either in holes or on the limbs or in the crotches. Shrubbery and trees for nesting sites, therefore, are essential for making a place attractive to birds, and a double purpose is served if the kinds planted are chosen from the list of fruit-bearing species given further on. Shrubs

[1] Dearborn, Ned, "The English Sparrow as a Pest," 24 pp., 17 figs., 1912.

should be allowed to form thickets and should be pruned back severely when young so as to produce numerous crotches.

Constant removal of old trees, and modern tree-surgery, have resulted in a great diminution in the number of tree cavities, the natural homes of most of our hole-nesting birds. Fortunately most of these birds will utilize artificial nest cavities, or bird houses. The sizes useful for various birds, plans for making, and illustrations of numerous bird boxes are given in Farmers' Bulletin 609.[1] The most common errors in putting out bird houses are choosing poor locations and supplying too many boxes. A bird house needs only partial shade, and houses on poles usually are taken. Martins prefer a house standing apart from trees. Entrances to boxes should be sheltered by projecting roofs and should face away from the prevailing wind and rain storms. All bird houses should be constructed so that the interior may easily be examined and cleaned.

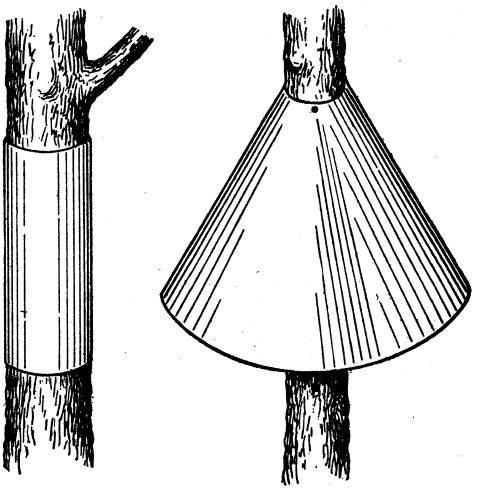


FIG. 3.—Tree guards.

As a rule birds do not like being crowded, and if a place is studded with bird houses only a few will be occupied. Birds not only do not want bird neighbors too near, but are impatient of human meddling, and therefore should be granted as much privacy as possible during the actual incubating and brooding. Nests built in shrubbery are especially likely to come to a bad end if the birds are frequently disturbed.

If ground-nesting birds, as bobolinks, meadowlarks, and bobwhites, are to be protected, grass in the nesting fields must not be cut during the breeding season.

WATER SUPPLY.

Nothing has a more potent attraction for birds during hot weather than drinking and bathing places. The birds' water supply should be a pool not more than a few inches deep, the bottom sloping gradually upward toward the edge. Both bottom and edge should be rough, so as to afford a safe footing. A giant pottery saucer (fig. 4, *a*) is an excellent device, or the pool may be made of concrete, or even metal, if the surface be roughened (fig. 4, *b*). The bird bath may be ele-

[1] Dearborn, Ned, "Bird Houses and How to Build Them," 19 pp., 48 figs., 1914.

vated, or on the ground if on an open space where skulking enemies can not approach too near.

A water supply is appreciated in winter as well as in summer; if running water can not be provided that supplied should be warmed to delay freezing.

FOOD.

Food supply is the vital factor in bird life and the most important single offering that can be made in efforts to attract birds. It is important to note that an ample supply of food prior to and during the nesting season tends to increase the number of eggs laid and also the number of broods in a season. Bird food may be supplied in two ways—by planting trees, shrubs, and herbs which produce seeds or fruits relished by birds, and by exposing food in artificial devices. The most familiar phase of the latter method is winter feeding.

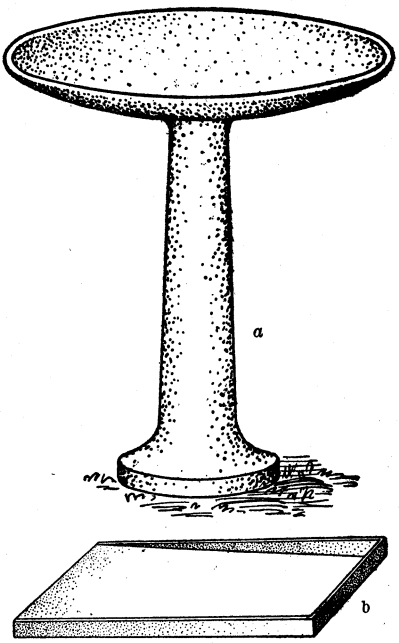


FIG. 4.—Bird baths: *a*, Pottery; *b*, metal or concrete.

ARTIFICIAL FOOD SUPPLY.

During the season when the natural food supply is at its lowest ebb birds respond most readily to our hospitality. Winter feeding has become very popular, and the result has been to bring about better understanding between birds and human kind.

The winter foods commonly used include suet or other fat, pork rinds, bones with shreds of meat, cooked meats, meal worms, cut-up apples, birdseed, buckwheat, crackers, crumbs, coconut meat, cracked corn, broken dog-biscuits or other bread, hemp seed, millet, nut meats of all kinds (especially peanuts), whole or rolled oats, peppers, popcorn, pumpkin or squash seeds, raw or boiled rice, sunflower seeds, and wheat.

The methods of making these supplies available to birds are as varied as the dietary itself. A device very commonly used is the food tray or shelf (figs. 5 and 6). This may be put on a tree or pole by a window or at some other point about a building, or strung upon a wire or other support on which it may be run back and forth. The last device is useful in accustoming birds to feed nearer and nearer

a comfortable observation point. A fault with food shelves is that wind and rain may sweep them clean and snow may cover the food. These defects may be obviated in part by adding a raised ledge about the margin or by placing the shelf in the shelter of a wall or shielding it with evergreen branches on one or more sides.

Feeding devices not affected by the weather are preferable. An excellent one is a coconut with a hole bored in one end (fig. 7). The cavity is filled with chopped suet and nuts or other food mixture, and the nut is suspended by a wire from a limb. The size of the hole regulates the character of the guests; if small, large birds can not gobble the supply. The coconut meat as well as the stuffing is eaten. Cans with small openings may be substituted for coconuts. Food baskets of any desired size made of wire netting

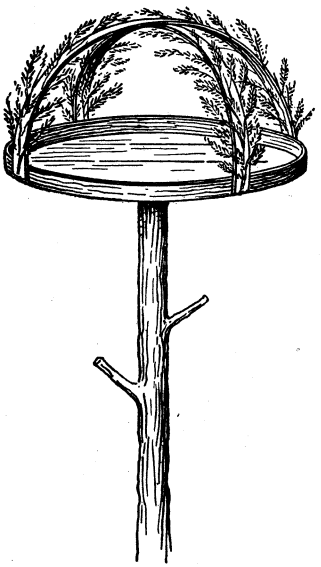


FIG. 5.—Food tray.

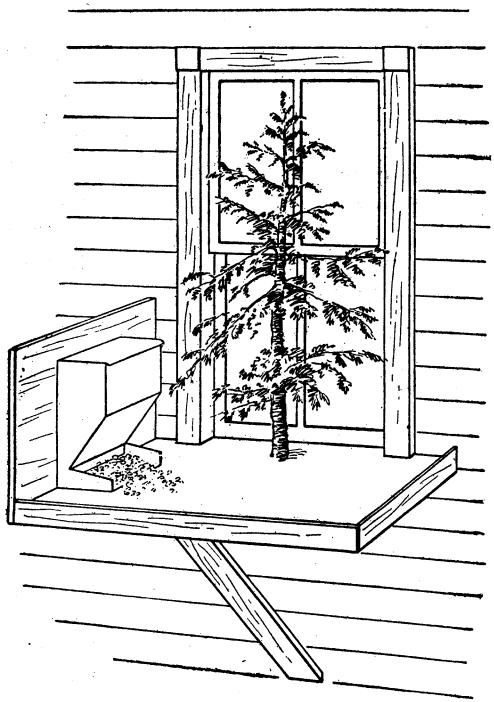


FIG. 6.—Food shelf.

or a metal grating may be hung up or fastened to the trunk of a tree. Food mixtures in melted fat may be poured into holes made in a branch or stick (fig. 8) or in cracks of bark or over evergreen branches. All of these devices minimize or obviate the disturbing effects of stormy weather.

More elaborate apparatus for the same purpose comprises various forms of food hoppers and food houses. The food hoppers (figs. 6 and 9) in common use for domestic fowls are adapted to the feeding of birds, and some special forms are now manufactured for wild birds.

The food house is a permanent structure, with solid roof, and glass on one or more sides to permit observations (fig. 10). The food trays

it contains are entirely sheltered from the weather. In one style this result is obtained by mounting the house on a pivot and furnishing it with vanes (fig. 11) which keep the open side always away from the wind.

Game birds and sparrows may be provided with feeding places by erecting low hutches or making wigwamlike shocks of corn or grain sheaves under which food may be scattered. The opening should be to the south.

FIG. 7.—Coconut larder.

Those who desire to have birds about their homes should not feel that their power to attract them is gone when winter is over. Winter feeding easily passes into summer feeding, and experience proves that some birds gladly avail themselves throughout the year of this easy mode of getting a living.

NATURAL FOOD SUPPLY.

We have thus far considered ways of feeding birds tidbits we ourselves have gleaned. We may feed them by another method, by cultivating their natural food plants and allowing them to reap the harvest in their own way.

Less has been done in this respect for the true seed-eating birds than for those fond of pulpy fruits. The reason is obvious—our seed-eating birds largely patronize weeds, which we do not wish to cultivate, while the fruit eaters depend upon many plants which are held in such esteem for their ornamental value that they are generally cultivated.

FEEDING SEED-EATING BIRDS.

Something can be done to attract the seed eaters about our homes, however. A number of commonly cultivated annual plants, belong-

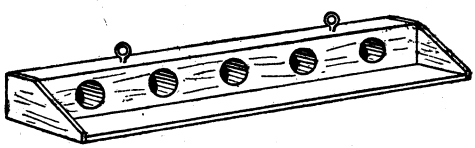


FIG. 8.—Feeding stick.

ing to the same groups as those upon which the birds feed extensively in nature, produce good crops of seeds. These plants, being dependent upon cultivation, can be used without fear that they will become pests. The following are suggested for the purpose: Prince's feather (*Amaranthus cruentus*), love lies bleeding (*A. caudatus*),

asters, calandrinias, blessed thistle (*Carduus benedictus*), centaureas, California poppies (*Eschscholtzia*), sunflowers, tarweed (*Madia elegans*), forget-me-nots, *Polygonum orientale* and *P sachalinense*, *Portulaca*, *Silene*, and sugar cane (sorghum varieties).

The various millets are relished by nearly all seed-eating birds. Common millet (*Panicum miliaceum*), Japanese millet or barnyard grass (*Echinochloa crus-galli*), and German millet or Hungarian grass (*Setaria italica*) may be obtained from most seedsmen, and should be planted in abundance by those wishing to attract granivorous birds. The height and stiffness of stalk of varieties of sorghum should make these abundant seeders valuable in winter. Japanese millet holds its seeds well, and, if planted thickly where it can grow up though a horizontal lattice work, makes a valuable cover and feeding place for winter birds. Canary grass (*Phalaris canariensis*) and various species of *Pennisetum* also are good for seed-eating birds.

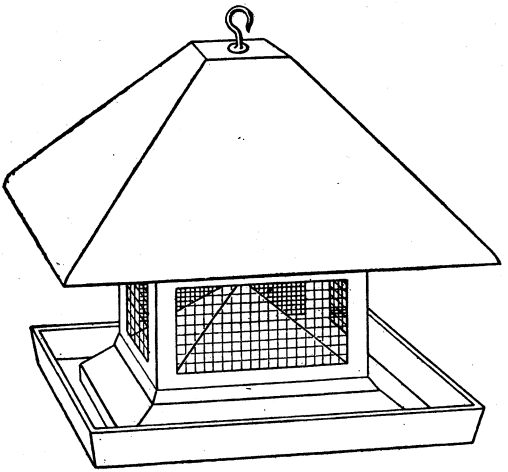


FIG. 9.—Food hopper (roof detachable).

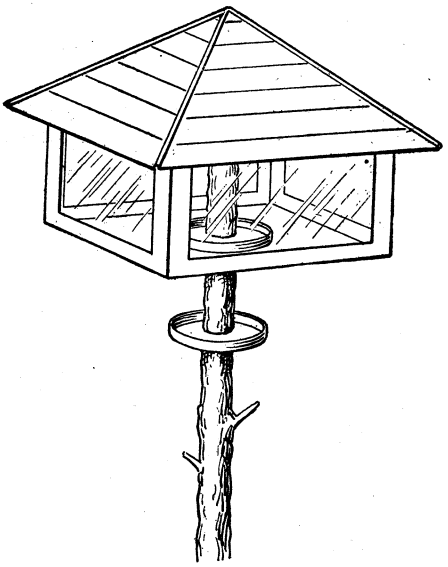


FIG. 10.—Food house.

Alders and birches bear in their numerous cones a supply of seeds which are eagerly sought for by redpolls, siskins, and goldfinches during the winter. Still another group of birds may be catered to by planting ashes and box elders. The winged fruits of these trees are opened and the seeds eaten by pine and evening grosbeaks, the visits of these birds being largely regulated by the supply of this kind of food. Larches, pines, and other conifers are attractive to crossbills as well as to some of the species just mentioned.

FEEDING FRUIT-EATING BIRDS.

Feeding fruit-eating birds is best accomplished by planting selected species of fruit-bearing shrubs and trees. Through late spring and summer there is usually an abundance of insect food in addition to fruit enough for all the birds. So far as fruit alone is concerned, fall is the season of overflowing abundance; in winter the supply gradually decreases, and late winter and early spring are the seasons of actual scarcity. This is the critical time of year for many birds, and a plentiful supply of wild fruit will tide them over. Fortunately, everywhere in the United States there are some fruits that persist until there is no longer any need of them. If enough are planted, no birds able to live on this class of food should starve. The best of these long persisting fruits are juniper, bayberry, thorn apples and related fruits, holly, and snowberry.

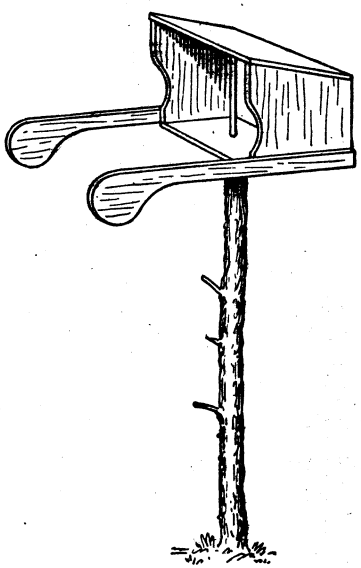


FIG. 11.—Food house on pivot.

The species listed in Table I are selected from a much larger number which are known to be favorites with fruit-eating birds. Various considerations have influenced choice, as ornamental value, earliness, lateness, or length of fruiting season, and especially availability of the plants through ordinary channels of trade. The data on fruiting seasons have been compiled from the principal herbaria of the Northwestern States, with a few additions from other sources.

The fruiting seasons indicated include the earliest and latest dates recorded for the Northwestern States. Hence it can not be expected that fruit will be available in any one locality throughout the entire bearing season of a plant unless a large number of plants are set out and in a variety of situations. Purchasers may obtain information from nursery catalogues as to where, when, and how to plant. Notes on species which may be substituted for some of those in the main list, and other comments, follow the table.

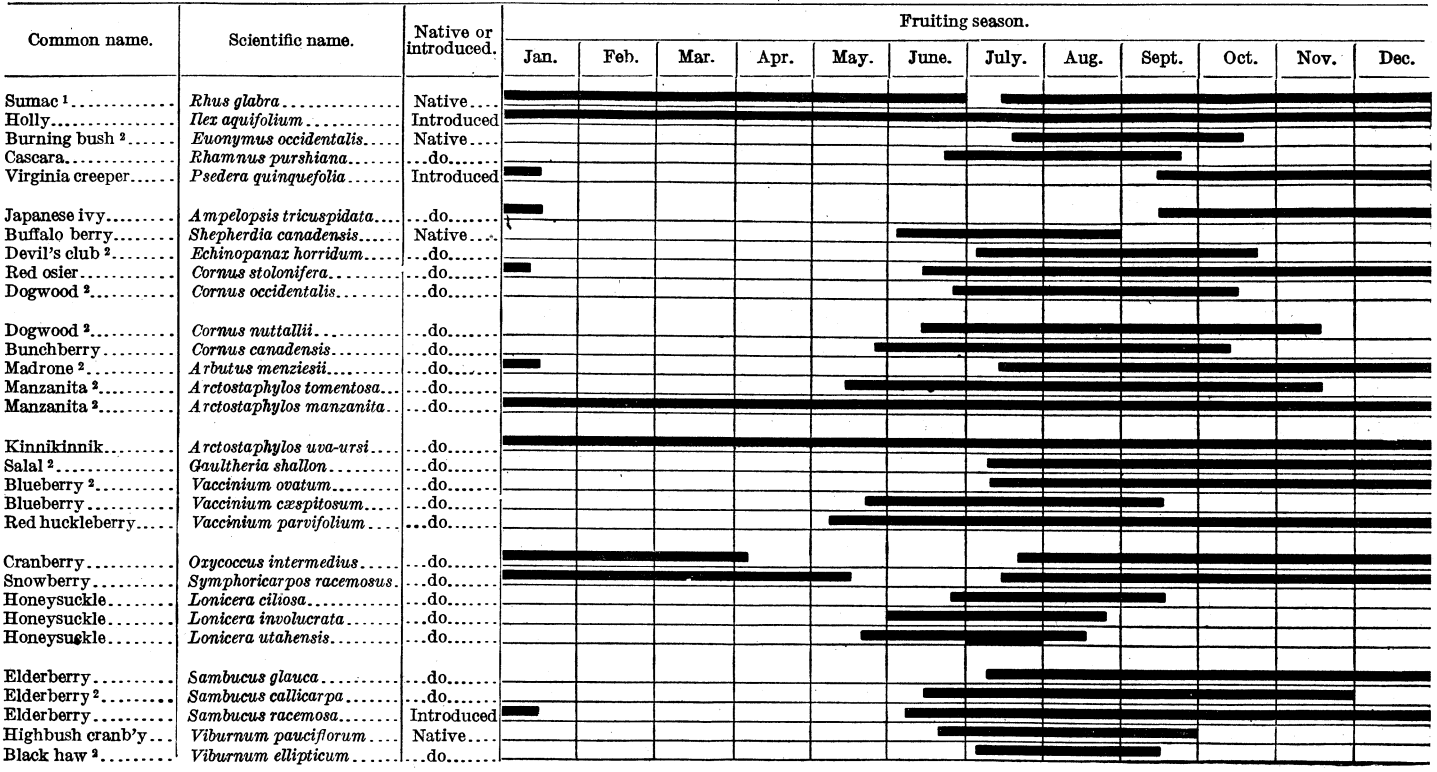
TABLE I.—*Seasons of fruit attractive to birds.*

Common name.	Scientific name.	Native or introduced.	Fruiting season. Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Irish yew	*Taxus hibernica*	Introduced												
Western juniper	*Juniperus occidentalis*	Native												
Rocky M't'n juniper	*Juniperus scopulorum*	do												
Bayberry [1]	*Myrica californica*	do												
Hackberry [2]	*Celtis douglasii*	do												
Russian mulberry [2]	*Morus alba* var. *tatarica*	Introduced												
Nandina	*Nandina domestica*	do												
Barberry	*Berberis vulgaris*	do												
Oregon grape	*Berberis nervosa*	Native												
Currant [1]	*Ribes divaricatum*	do												
Currant [2]	*Ribes irriguum*	do												
Currant [1]	*Ribes sanguineum*	do												
Currant [2]	*Ribes aureum*	do												
Salmon berry [1]	*Rubus spectabilis*	do												
Blackcap	*Rubus leucodermis*	do												
Evergreen blackb'y [1]	*Rubus laciniatus*	Introduced												
Sweetbrier	*Rosa rubiginosa*	do												
Rose	*Rosa gymnocarpa*	Native												
Rose	*Rosa nutkana*	do												
Rose	*Rosa pisocarpa*	do												
Strawberry [1]	*Fragaria chiloensis*	do												
Strawberry [2]	*Fragaria platypetala*	do												
Serviceberry	*Amelanchier florida*	do												
Thornapple	*Crataegus douglasii*	do												
Firethorn	*Pyracantha coccinea*	Introduced												
Firethorn	*Cotoneaster simonsi*	do												
Crabapple [1]	*Pyrus diversifolia*	Native												
Mountain ash	*Pyrus sitchensis*	do												
Wild cherry	*Prunus emarginata*	do												
Choke cherry	*Prunus demissa*	do												

[1] West of Cascade Mountains.

[2] East of Cascade Mountains.

TABLE I.—*Seasons of fruit attractive to birds*—Continued.



[1] East of Cascade Mountains.

[2] West of Cascade Mountains

Notes on the foregoing list.

Oregon grape. *Berberis aquifolium* (native) is just as good.

Currants. From the wealth of native species of currants *Ribes cognatum* and *R. viscosissimum* may be substituted in the arid interior, and *R. bracteosum* in the coast belt. *R. lacustre* and *R. cereum* are additional species of general range.

Serviceberry. Known for years as *Amelanchier alnifolia.*

Thornapple. Also known as *Cratægus brevispina.*

Crabapple. Also called *Pyrus* (or *Malus*) *rivularis.*

Mountain ash. Both the European and American mountain ashes (*Pyrus aucuparia* and *P. americana*) are known to hold their fruit to the middle of March at Pullman, Washington.

Dogwoods. *Cornus glabrata* also may be used west of the coast ranges. The bunchberry is native only to the higher altitudes, but can be cultivated generally.

Manzanita. *Arctostaphylos nevadensis* also may be used in the Cascade Mountains and westward.

Snowberry. *Symphoricarpos mollis* is as good as the species listed.

PROTECTING CULTIVATED FRUITS.

Birds devour cultivated fruit principally because the processes of cultivation diminish the wild supply. The presence of wild fruit in a locality always serves to protect domestic varieties, especially when the wild trees or shrubs are of the same kind as the cultivated ones and ripen earlier. Suitable kinds may be selected from those listed in Table I, for protecting various fruits according to the season of ripening. Among those most useful for the purpose are mulberry, wild blackberries and strawberries, serviceberry, wild cherry, and elderberry.

PUBLICATIONS OF U. S. DEPARTMENT OF AGRICULTURE RELATING TO BIRDS.

AVAILABLE FOR FREE DISTRIBUTION BY THE DEPARTMENT.

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How to Attract Birds in Northeastern United States. (Farmers' Bulletin 621.)
Common Birds Useful to the Farmer. (Farmers' Bulletin 630.)
Our Shorebirds and Their Future. (Separate 642 from Yearbook for 1914.)

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